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Relationship Between Criminal Behavior and High School Equivalency Program Completion

LaShawnda Cabey - Washington
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Walden University

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LaShawnda Cabey-Washington

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Walden University
2021

Abstract

The Relationship Between Criminal Behavior and High School Equivalency Program

Completion

by

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MSA, Central Michigan University , 2004

BS,BA N.C. Wesleyan College, 2000

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Criminal Justice

Walden University

November 2021

Abstract

High School Equivalency (HSE) Programs operate in response to the national increase in high school dropout rates. These alternative learning methods are attractive to nontraditional high school students because they are designed to accommodate students who are unable to complete their high school diploma via the traditional classroom setting. However, even though these programs continue to thrive in many communities, many students are still unsuccessful at completing these programs. Therefore, it is necessary to understand the possible factors that prevent students from earning the equivalent of a high school diploma or general education diploma (GED) via these programs. Grounded in Merton's strain theory (Snell et al., 1994) and Hirschi's (1969) social control theory, this quantitative research investigated the relationship between criminal behavior and high school equivalency program completion rates among 142 study participants. Chi square tests of independence were used to determine the significance of the relationship between HSE program completion and criminal behavior. One of the purposes of this study was to isolate factors that influence criminal behavior in HSE programs, so that these factors can be mitigated. The results of this research indicated that the relationship between HSE program completion and criminal behavior was statistically significant. The results from this study provide a positive social change by serving as a resource for adult education and criminal justice program personnel, to better predict the successful outcome of completing a HSE program and obtaining a HSE diploma, and to improve the curriculum correspondingly.

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Dedication

This is dedicated to my family, friends, and professional colleagues. Parents can always see the potential in us both before and beyond we can see it. I am grateful that my mother Grace always told me that I had “too much sense in my head to let it go to waste” and my father Richard constantly exclaimed “ Shawnda, an education is something that no one can ever take away from you once you earn it.” It is from them that I inherited my earthly strength and perseverance. I am most grateful to my personal savior. Philippians 4:13 - I can do all things through Christ which strengthens me.

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Chapter 1: Introduction to the Study

Introduction

Education is an essential economic and social indicator. Various factors may impact the attainment of at least a high school diploma or equivalency credential, and the dropout rate remains a national concern. In 2014, the median income for individuals between the ages of 18-67 without a high school diploma (or equivalent) was about 10,000 a year less than for individuals with at least a high school credential (McFarland, 2018). Many of these students seek assistance from alternative programs to assist them with earning a high school credential. The General Educational Development test dates to the 1940s and has evolved to become a common alternative to a traditional high school diploma (Heckman et al., 2011). Subsequently, the notion of simply taking an assessment to earn the equivalent of a high school diploma has expanded into enhanced literacy programming referred to as high school equivalency (HSE) programs. HSE programs are alternative learning programs that offer General Educational Development test and HiSet exam (which also confers a high school equivalency degree) assessment preparation, English language acquisition skills, adult basic education skills and adult high school diploma courses. In addition to their primary goals of increasing literacy and high school credential attainment, career awareness and employment skills that lead to industry certifications are also integral components to instruction in these structured programs.

The purpose of this study was to gain a better understanding about the factors that prevent students from obtaining a high school credential via a specific HSE program. Common variables such as age and gender have emerged as indicators that deter the

attainment of an HSE diploma. Although various factors may contribute to the nonattainment of a high school credential, criminal behavior is thought to be a key variable in the noncompletion of HSE programs.

Background

The history of education in the United States reflects concerns with the nation's high school dropout rates. McFarland et al. (2018) asserted that 4.8% of individuals aged 15-24 do not hold a high school credential. Because many students opt not return to traditional high school settings after dropping out, enrollment into alternative credentialing programs is a common decision. Therefore, HSE programs operated in response to the national increase in high school dropout rates (McFarland et al., 2018). These alternative learning programs were attractive to nontraditional high school students because they were designed to accommodate students who were unable to complete their high school diploma in a traditional classroom setting. However, as these programs continued to thrive in many communities, many students were still unsuccessful at completing these programs, generating the need to research the possible factors that prevent students from earning the equivalent of a high school diploma or GED via these alternative programs. As dropout rates continued to increase, the need to identify associative factors that influence criminal behavior in HSE program students and which prevent them from earning a high school equivalency credential was imperative. Terminology referring to the attainment of an HSE credential throughout this study is synonymous with the reference to a GED, known variously as a general education diploma or graduate equivalency degree.

Unfortunately, many HSE program students drop out each semester without notice. Both the program director and instructors are left perplexed as to why students abruptly exited the program. Studying the challenges and barriers students face while participating in HSE programs provided insight into this recurring problem. An extensive examination into the factors that impeded the educational success of HSE program students may serve as a catalyst for positive change in both HSE programs and society in general. HSE programs provide educational services such as formal basic skills and career readiness instruction. As I considered the impact of criminal behavior on HSE program completion, I realized knowledge of an individual's propensity to exhibit criminal behavior is essential to promoting that person's long-term academic success. Robertson and Walker (2018) suggested that educational factors, mainly truancy, predicted stronger involvement in the criminal justice system. Therefore, high school equivalency program students were the most appropriate data source to provide insight on the barriers that influence criminal behavior and affect high school equivalency program completion. Based on this information, it was necessary to examine the relationship between criminal behavior and high school equivalency program graduation completion.

Purpose of the Study

The purpose of this quantitative research was to examine the relationship between criminal behavior and high school equivalency program graduation rates. The independent variable was prior arrests. The dependent variable was high school equivalency program graduation completion.

Problem Statement

Education supports employment mobility and individual self-sufficiency in a healthy society. This epistemological approach expanded knowledge pertaining to high school equivalency programs and criminal behavior. The valuable information obtained through this research may guide future policy and program development efforts and support early criminal behavior interventions in the target population.

In North Carolina, HSE programs are generally housed and operated on community college campuses. The state is economically, geographically, and culturally diverse. Accordingly, the graduation rate data of one HSE program located on the campus of a community college was provided by the program's research data specialist. The independent variable of criminal behavior was magnified to determine a possible correlation to the dependent variable of high school equivalency program graduation rates. Covariates such as age, race, and gender provided the necessary data to determine the impact of criminal behavior on HSE students. This assessment assisted with determining the impact of criminal behavior on student completion of an HSE program.

HSE programs are evaluated based on two primary performance measures: student retention rates and measurable skills gains. The state Department of Community Colleges ranked HSE programs annually based on student progression. However, the graduation rate was declining due to early exit. Furthermore, students who enrolled in HSE programs often encountered barriers that prevented them from earning a high school equivalency diploma. Some of these barriers included prior arrests, poverty, gang affiliation, and gender (Parr & Bonitz, 2015). Research exploring the academic and social

barriers to completing a high school diploma via high school equivalency programs has indicated a correlation to social factors; however, criminal behavior was not addressed (King, 2002). Subsequently, additional research was necessary to examine the influence of criminal behavior on high school equivalency program graduation rates.

Nature of the Study

Quantitative research compares statistical data from the dependent and independent variables to determine if a relationship exists (Wagner, 2016). For this study I used quantitative measures to evaluate the impact of criminal behavior on HSE program student graduation. Using the dependent variable of HSE program graduation and the independent variable of criminal behavior, I sought in this quantitative nonexperimental study to determine the possibility of a correlation between criminal behavior and the attainment of a high school credential. With an associative research approach, I explored the relationship of criminal behavior to program completion with the study population. To gain a broader perspective of the societal implications of criminal behavior and dropping out of high school, further exploration was warranted. I used a descriptive analysis along with various SPSS resources to express the variables data.

Research Question and Hypotheses

This quantitative study addressed the following research question and hypotheses:

RQ: What is the relationship between HSE completion status and criminal behavior status?

H_0 : The association between HSE completion status and criminal behavior status is nonsignificant. The variables are independent.

H_1 : The association between HSE completion status and criminal behavior status is statistically significant. The variables are interdependent.

Conceptual Framework

The theoretical frameworks upon which this research was predicated were Merton's strain theory (Snell et al., 1994) and Hirschi's (1969) social control theory. I combined a historical theory with a contemporary theory to gain more insight into multiple perspectives on criminal behavior. These two theories were complimentary as Merton's theory offered the reasons why individuals commit crimes while Hirschi offered a possible solution to the problem. To address the question of why individuals from similar circumstances choose to engage in criminal behavior, the various types of strain that individuals experience were explored. Agnew (2016) contended that both the importance of opportunity and awareness of the present situation existed in strain theory. Therefore, resistance and susceptibility are functions of factors that influence the emotional and physical reaction to strain. Sociologist Hirschi declared that the four social bonds of attachment, commitment, involvement, and belief connected individuals to society and that the absence thereof increased the tendency for criminal behavior (Ruth, 2020). Social bonds also support the development of healthy, strong, relationships. It is often these relationships that uphold the emotional health of students as these relationships often help alleviate strain or stress. Contrarily, Agnew (2016) suggested that an individual's magnetism to criminal behavior was not exclusively a function of controls but included the individual's vulnerability and resistance to the occurrences that caused strain. Because education is a major component of a healthy society, understanding the

influence of strain and social control on the attainment of a high school credential was crucial. Furthermore, measuring the social impacts of not earning a high school credential assists with marshalling continued support for the economic future of students and lower dropout rates.

Strain Theory

The question of whether anomie refers to the control that social norms have on individuals or the strain put on individuals when norms conflict with social reality has been the subject of debate among researchers. Anomie is defined as the absence of structure, rules, and societal organization (Vejar, 2019). In addition to contributing to strain, the lack of a high school diploma causes individuals to feel as though they possess moral standards that are below societal norms.(Gore et al.,2016) Vejar's research examined the correlation of anomie with crime and provided an explanation of its interconnectedness with deviant behavior. Strain theory combines both sociology and criminology and is beneficial to better understanding criminal typologies and deviant behavior. (Ganem,2010)

Merton identified strain as an important cause of deviance based on three axioms pertaining to goal attainment (Snell et al., 1994). Students often set educational goals that are attainable and influenced by their self-perceived skill level, generational education influences, and culture. It is the nonattainment of those goals that contributes to strain, leading students to stop-out and possibly resort to committing crimes. Durkheim's perspective on criminal behavior proposed that society entails the presence of crime and that criminal behavior is normal yet subjective (Vejar, 2019). This assertion was realized

in society by the fact that researchers often investigated crime even in its absence.

Furthermore, Durkheim asserted that strain is a common cause of deviant behavior (Snell et al., 1994) It is possible that the strain imposed on HSE students necessitates criminal behavior.

Participation in an HSE program requires students to maintain a healthy balance of school, work, and home responsibilities. To accomplish this, a strong support system and access to resources are essential. While strain theory asserts that strain caused by stress and anger leads to criminal behavior, Ganem (2010) conducted a vignette study that concluded that some negative emotions facilitate criminal behavior while other emotions impede it. HSE students often have elevated stress levels due to their home environment, familial relationships, or psychological issues(King,2002). The current examination of the social and criminal barriers that HSE students encounter aids in understanding decisions to stop-out or discontinue their studies.

The assertion that criminal behavior was a result of society's placement of pressure on individuals to achieve goals even though they lack the means to accomplish them (Murphy & Robinson, 2008) was complementary to the foundation of this study. The application of strain theory to this research helped me identify behaviors with peers and family that increased the likelihood of criminal behavior (see Huck et al., 2017). Strain theory also supported this research because adult students experience stress or trauma that potentially make them engage in abnormal behaviors. Furthermore, the use of this theoretical framework could help facilitate additional program development and policy change.

Social Control Theory

The endeavor to understand social bonds and their relationship to criminal activity were influenced by preceding theorists such as Thomas Hobbes and Emile Durkheim (Ruth, 2020). While the focus of their research was partial to the social implications of criminal behaviors, knowledge gaps exist in the relationship between criminal behavior and the attainment of educational goals. The focus of Hirschi's research was the relationship between human nature, delinquency, and the causes of human behavior (Ruth, 2020). While societal connections are developed through the achievement of personal and financial goals, they are often influenced by various societal factors such as culture and socioeconomic status. (Gore et al., 2016) Hobbes's moral philosophy influenced the development of the modern social control theory; however, it was filled with ambiguity as the research focused primarily on the subjectivity of social contracts. (Rankin & Wells, 2016)

Historical studies regarding social control theory asserted that when an individual's societal bonds were broken, they were more apt to engage in deviant behavior (Hirschi, 1969). The premise of Hirschi's social control theory is that criminal behavior is a result of social constraints rather than impulses (Rankin & Wells, 2016). The social issues that HSE students withstand often occur early in life and develop as they mature. The nature of those issues often derives from cultural, economic, or social disparities. To better understand the reasons why HSE students are not earning at least a high school credential, it was important to examine the link between social control and criminal behavior. Prior research posited that self-control allowed individuals to develop

strong social relationships (Eisenberg et al., 2014). Eisenberg's research also examined parental and peer relationships to establish their contribution to control mechanisms supported by educational programs.

Definition of Terms

High school equivalency program: Programs that offer instruction and official assessment administration to students who do not earn a high school diploma in a traditional school setting.

General Education Diploma: Also known as General Education Development, graduate equivalency degree, and GED, an equivalency of a high school diploma that is earned by obtaining the required score in the subject areas of Reading, Writing, Social Studies, Science, and Mathematics (G.T.S., 2018)

Criminal behavior: Conduct constituting criminal acts that may be due to various social and/or psychological risk factors (Matejkowski et al., 2017).

Poverty: The level at which a family's total gross income is less than the national threshold as reported by the U.S. Census Bureau (Kena et al., 2016).

Socioeconomic status: A social classification based on the combination of occupation, education, and income factors (Heimer, 1997).

Strain: An act or emotion that results in deviations from normal responses in a person and includes psychological and physiological symptoms such as anxiety behavioral symptoms (Cooke & Rousseau, 1983).

Social control: Human behavioral norms and practices that contribute to social order and the way people define and respond to deviant behavior (Hunter, 2003).

Scope

In this study I focused on criminal behavior as a completion factor for HSE program students due the lack of exploration of this factor in the success of HSE programs. I considered data on prior criminal behavior for analysis. Criminal activity of students who entered the HSE program were measured by arrests. The study population consisted of a random sample of HSE program students who enrolled in an HSE program at a local community college after a period of separation from school. I examined the experiences of this target population of students to understand the relationship among the dependent and independent variables. The use of program enrollment data pertaining to post enrollment convictions was used as a study resource. I used peer-reviewed scholarly journals in criminal justice and academic databases to conduct research. Key words included *high school equivalency*, *GED*, *criminal behavior*, and *graduation rate*.

Delimitations

The current study included students who re-enrolled in an HSE program after at least a 90-day period of separation. Separation is defined as attaining an inactive status in the student database and having no contact with instructors or the program's administration. First time program enrollees into the HSE program were excluded from the study population as for the current study I aimed to obtain data pertaining to students re-entering the program. I selected one HSE program in the Eastern United States was selected for the present study.

Assumptions

Because HSE programs rely on federal and state funding, due to the uncertainty of the total financial impact of the COVID-19 pandemic, a significant reduction in funding resulted in modifications in program operations. Therefore, I assumed that the program remained operative during the proposed time parameters of the study. I utilized archival data analysis because the receipt of data was stagnated by reduced program operations. I also assumed that study data provided by study participants pertaining to criminal behavior was true and accurate. Furthermore, it was necessary to assume that other barriers to education existed and impacted student success and HSE program completion rates.

Limitations

This study had potential limitations. For the current study I acknowledged that the completion time for each student varied; therefore, completion data for some students was not available during the study period. In addition, because HSE program enrollment data was supplied via the program research data specialist, a change in employment in that position resulted in the delay of program data being provided to me. The use of one specific program's data resulted in a limited sample size, yet it provided opportunity for future studies.

Significance of the Study

The national graduation rate has been a major concern for many years. While most individuals earned a high school credential in a traditional high school environment, some students sought to earn a high school equivalency credential via alternative

programs. Despite moderate enrollment, very few students earned a credential without any interruptions in their study plan. To support student success and contribute to the important educational values of society, examination of the barriers that prevented individuals from earning a high school equivalency credential was worthwhile.

Research has indicated that two negative results of dropping out of high school are the economic costs of supporting additional social programs and a local economy with an unskilled workforce (Youngsik et al., 2018). Education and employment are critical components of a thriving society. Identifying predictors that cause students to depart prematurely from HSE programs may positively impact crime rates since some crimes are committed because of financial lack or other needs. The absence of a high school diploma limits career growth, earning potential, and social stability. Therefore, dealing with these challenges while studying to obtain an HSE diploma may increase the propensity for criminal behavior.

Moreover, an examination of familial and employment transitions, economic stressors, and social psychological factors revealed that educational pathways are significantly associated with changes in crime rates (Swisher and Dennison, 2016). While the current study was among the few studies found to examine the relationship between the two unique variables of HSE program completion and criminal behavior, the outcome was interesting given the increases in crime rates and educational pathway opportunities in the United States. The results of this study may guide future HSE program policy and development efforts and provide insight to HSE program and community college administrators by identifying the need for agency collaboration and identifying resources

that encourage program completion. This research may influence social change by providing early intervention recommendations that support student retention and deter criminal behavior.

Summary and Transition

Considering the research pertaining to education, criminal behavior, and the history of HSE programs provided foundational insight that led to the identification of potential relationship qualities among the major variables in this study. The theoretical applications of this research correlate to the various types of strain and social constructs that led to criminal behavior in HSE program students. Furthermore, understanding how and why HSE programs have operated culminated the review of pertinent literature and provided broader knowledge of why criminal behavior can impacts HSE program students.

Chapter 2: Literature Review

Introduction

The purpose of this study was to determine if a relationship existed between criminal behavior and the attainment of a high school credential through an HSE program. In addition to guiding recommendations for increasing the program graduation rate and improving the quality of life for students, the review of the existing literature provided an understanding of the challenges faced by HSE students, barriers to education, the impact of criminal behavior on society, and the significance of HSE programs. Because this study was limited to one specific HSE program, a description of the program is included in the research documentation.

In addition to a discussion of the data sources used to conduct the research, I explain in this chapter the functionality of HSE programs, describe the types of instructional programs offered, and profile the types of students served in greater detail. I also discuss the interconnectedness of the quantitative research approach and the theoretical framework. Lastly, I review current research regarding HSE programs pertaining to the various types of barriers to education and the impact of criminal behavior on both individuals and society.

Literature Search Strategy

I used the following databases to identify current literature: Directory of Open Access Journals, SAGE knowledge, and PsycINFO. I used the following key words: *high school equivalency, HSE programs, GED, at-risk students, alternative education, quantitative studies, program evaluation, criminal behavior, and education barriers*. I

reviewed scholarly journals and periodicals and categorized them by correlation. Also, I used online reports from a state agency to provide more context regarding program performance and statistical data.

Theoretical Basis or Conceptual Framework

Because HSE students experienced academic, social, or emotional strain, the theoretical basis of this research related to Merton's strain theory (Snell et al., 1994) and Hirschi's (1969) social control theory. An examination of these theories preceded the quantification of social bonds and strain that lead to criminal behavior. Because it was already known that students experience strain, in the review of the literature I explored the possible connections of this strain to criminal behavior. An examination into the various kinds of strain experienced by HSE students provided a deeper understanding of the reasons why students stop-out.

Review of the Literature for Theoretical Framework

An analysis of the applicable theoretical frameworks of strain and social learning theories guided this research. These theories assisted with the identification of the dependent and independent variables in this study. Literature containing statistical data on criminal behavior and high school diploma rates increased the reliability of this study. The review of literature also provided the insight of various scholarly practitioners relating to the quantitative methodology and summations of facts and findings for this study. Furthermore, the literature review assisted in identifying gaps in the field of study and aids in suggesting recommendations for future studies.

Current Research on the Topic

U.S. data showed that of ninth graders entering high school in 2017, approximately 236,000 students would not complete the school year (McFarland et al., 2018). Additionally, the number of individuals without a high school credential who were unemployed was higher than those who held such credentials (U.S. Department of Labor, 2015). Alternative programming was one way to ensure that education continues despite some of the challenges that prevented some students from earning a high school credential.

Furthermore, an examination into the patterns of students who dropped out of school guides the development of resources to support student persistence. Abeling-Judge (2020) suggested that criminal behavior was exhibited less when preventive influences were present and after individuals desisted from criminal behavior. This belief supported the notion that social experiences during adolescence that lead to criminal behavior could appear to be dormant as individuals aged and reappear whenever they returned to school to continue their formal education. Boylan et al.(n.d.) asserted that the high school dropout rate has been a major concern in a longitudinal analysis on student drop out and reengagement. Thus, research has shown that for students who dropped out and returned to school, recommitting to education impacted the likelihood of engaging in future criminal activity based on the age of reenrollment in formal education (Abeling-Judge, 2020). This finding supported both the importance of education to society and the targeting of behavioral interventions during adolescence.

Swisher and Dennison (2016) examined the relationship between educational pathways and changes in crime through a longitudinal study. Variables such as family and employment transitions and economic stressors were examined to produce binomial models that explained the roles of these factors on educational pathways. An upward and downward scale was used to measure the variables. The data analysis reflected that downward mobility was predictive of elevated crime whereas upward mobility was associated with a decrease in crime (Swisher & Dennison, 2016). Students enrolled in HSE programs were exposed to career pathways through career awareness integration in academic curriculums. Identifying the point at which a possible relationship between the two variables culminated created a means for the development of interventions that deter criminal behavior in HSE program students.

Research Design

Defining High School Equivalency Programs

The HSE program at the study site provides services to diverse populations of students and is located on a community college campus within various community organizations. The adult education system is generally composed of students who are 18 years of age and older. Students entering the HSE program are orientated upon entrance into the program based upon their age. Students aged 16 or 17 are granted admissions into the program upon receipt of a documented release from the last public school they attended along with the administrator's and legal guardian's approval. Students aged 18 and above are able to self-enroll in the program. During orientation, students are administered an approved assessment to identify their educational functioning level.

Once the student completes and submits the required documentation and assessments, the data is used to develop their individualized study plans. Student attendance and progression data are collected and reported electronically. The program's research and data specialist is the dedicated professional who enters, analyzes, and reports the data to the appropriate governing federal and state entities.

Since as early as 1777, the federal government has allocated funds for basic skills instruction (Davidson, 2017). HSE programs were formerly referred to as basic skills programs and complied with necessary instructional and operational guidelines to receive federal funding. The Adult Education and Family Literacy Act, Title II of the Workforce Investment Act of 1998 was the founding legislation for adult education funding and is currently referred to as The Workforce Innovation and Opportunity Act (Shin & Ging, 2019). HSE programs operate under this legislation through a designated state agency. The legislation defined the process by which adult education programs operate, the types of students they serve, and program accountability measures required to receive federal funding.

High school equivalency programs provide alternative methods for earning a GED or high school diploma. However, due to the varied scope of the students served in these programs, there are often disparities among programs. According to Miller et al. (2016), the perceptions of HSE program directors revealed a lack of program alignment between HSE and career readiness programs. However, the autonomy to operate in a manner that met the academic and developmental needs of students was commendable.

Research suggested that employers often rely on community colleges to provide the basic academic and career readiness skills (Johnston & Nelson, 2002). Therefore, HSE program students receive instruction that integrates the five core subjects of Mathematics, Science, Social Studies, Reading, and Writing along with integrated career awareness skills. McFarland et al. 2018, noted the results of multiple surveys and presented high school dropout data on various age groups and from multiple locations. A detailed study was performed that focused on the normal 3-year graduation rates of a ninth to 12th grade study population to determine the number of students who graduated on time (McFarland et al. 2018). The long term of this study allowed time for the trends in participant completion rates to be identified, as well as the number of students who used alternative programs to completed their high school diploma. The length of time to graduation completion by race was also examined which also contributed to the current study.

For the most part, the primary objectives of HSE programs are to provide basic academic and employability skills instruction. There are other support services offered through HSE programs as they also serve as sources for community connections to resources that promote self-efficacy and foundational academic skills. Some examples of the agency resource referrals that students receive are for vocational rehabilitation services, department of social services, and employment services. These agencies aid with services such as childcare, transportation, food, healthcare, and housing assistance.

Defining High School Equivalency Program Students

Students who enrolled in HSE programs were required to meet the minimum age of enrollment, age 16. However, HSE programs did not declare a maximum age for program participation. The student population included students from diverse backgrounds, socioeconomic statuses, and cultures. Nonetheless, the need to identify potential barriers to learning faced by these students was intensified. Therefore, some common barriers that had the propensity to impact recidivism, crime, and self-sufficiency rates were examined.

Wright-Stone's, (2015) qualitative research provided insight into the lived experiences of adult GED students including: familial relationships, peer experiences, and mental wellness. The insight gained from the students' perceptions created awareness about the possible reasons why students drop out of school. HSE programs remained focused on student success by providing strong academic skills through quality instruction. Since instructional plans were designed to treat the "whole student", knowledge about the unique traits encompassed within non-traditional student populations was climacteric to understanding the link between strain, earning a high school credential, and criminal behavior. Study transcripts concluded that familial attachment was a factor that impacted student emotional and mental well-being (Wright-Stone,2015).

Alternatively, Boylan & Renzulli's quantitative study focused on identifying school factors that cause students to drop out of school. While historical studies have explored individual factors, this research categorizes dependent variables into two

dropout subgroups categorized as push or pull and examined their impact on the student reentry to school (Boylan & Renzulli, n.d.). The Societal benefit of this study was that it provided relevant and specific reasons as to the reasons why students drop out of school. This longitudinal study provided long term data on students that was essential to understanding the students' academic behaviors over an extended period. Understanding the behavioral patterns of students provided a basis for further study of the commonalities to criminal behavioral patterns and the probability of criminal behavior to impact HSE program completion.

HSE program students possessed varied levels of academic skills and came from diverse educational backgrounds. This posed a challenge to some programs due to the wide variance in learning needs. HSE program components included English Language Acquisition (ELA) for students whose native language was not English and Adult Basic Education programs for lower-level students and nonreaders. In addition to the academic challenges, students also held multiple positions as parents, employees, and citizens. Stein (2017) persisted that adult education programs address the skill level, social, and economic challenges faced by adult learners via policy enhancements. While the need to stay abreast of ever-changing skills and technology was essential it added stress to underfunded HSE programs. Moreover, common barriers to student learning such as discipline, personal issues, and family presented obstacles that made program completion improbable.

Barriers to Education

Personal Barriers

(Parr & Bonitz, 2015) took a quantitative research approach and evaluated the connection of social cognitive and expectancy values theories to the predictors of dropping out of high school. The exploration into the educational behaviors of high school dropouts aimed to reduce the number of high school dropouts and supported the development of future focused research that identified the risk factors associated with dropping out of high school. Past exposure to criminal behavior was just one of the possible risk factors experienced by some students. Nonetheless, study findings indicated that performance, parental involvement, and absenteeism all contributed to dropping out of high school.(Parr & Bonitz, 2015) Since attaining an HSE credential is sometimes a condition of probation, understanding the personal barriers to learning can better equip HSE programs with persistence tools and strategies to support student retention efforts. Furthermore, study results yield that both social and economic factors are predictors of high school dropouts (Parr & Bonitz, 2015).

Social Barriers

Social factors impacted learning as well as the way individuals communicated with others. Two primary social barriers to learning that HSE program students experienced were lack of communication and family support. HSE programs provided students the necessary support resources required to succeed. When a student dropped out of high school, it was often due to some of the common social or economic barriers to education. Prior research focused on the relationship between variables such as school

size and academic achievement (Youngsik, et al., 2018). Alternatively, this research focused on the relationship between criminal behavior and HSE program graduation rates. The social implications of not addressing this phenomenon resulted in negative social and economic consequences for students and communities.

Social barriers such as abnormal cognitive, academic, and behavioral capabilities impeded student learning. Ranulin et al (2017) performed a descriptive qualitative study which focused on the importance of implementing learning history in HSE programs. Understanding the individual cognitive needs of students increased academic performance. The research further explained how the inclusion of learning history in HSE programs benefited instructional practices (Ranulin, Windasari, Sunardi, & Djono, 2017). HSE programs formed community partnerships that supported the resource needs of students. The programs provided student referrals for services such as mental health services, social services, childcare, and housing. Assisting students with improving their social challenges supported student persistence. Increasing student persistence will improved both program and student performance.

Communication

Communication was a barrier to learning for some students due to culture differences, dialect, or the presence of bias. Barieva et al.(2018) performed a multi assessment evaluation approach to study barriers to communication in students. The purpose of the research was to determine the need for teachers to consider individual characteristics when preparing for lessons (Barieva et al., 2018). HSE programs combatted communication barriers through the use on multiple methods of

communicating with students during the learning process. However, for students who were at risk of stopping out, it was sometimes a challenge due to the transiency of students. Persistent miscommunication between the HSE instructor and student often caused students to become disinterested in the learning process which ultimately led them to drop out of school.

Poverty/ Socioeconomic Status

Current research utilizes behavioral observations to show that children from impoverished communities are at risk for criminal offending (Kennedy-Turner et al., 2020). This quantitative research highlighted the role of education to determine whether education is a mediating risk factor for criminal behavior. Among other social and demographical variables, results concluded that aggressive children with low education had the highest odds of criminal offending. (Kennedy-Turner et al., 2020)

Koball & Jiang (2018) confirmed that factors such as parental education and employment, and race were a source of economic security during childhood. Students who lived at or below the poverty level often lacked the essential resources that supported the attainment of a high school credential. Acknowledgement of the fact that about 44 million adults in the United States had literacy skills at very low levels, and about half of these illiterate adults lived in poverty, intensified the quest to clarify whether a connection exists between education and poverty (Nicholas, 2019). Research suggested that families needed an income equivalent to double the amount of the poverty threshold set by the federal government to meet their basic needs (Jiang et al., 2018).

Furthermore, Nicholas's (2019) study showed a positive connection between illiteracy and poverty. Upon examination on a broader scope, the author also noted that higher levels of parental education decreased the likelihood that the poverty cycle would continue (Jiang et al., 2018). HSE program instruction included contextualization that demonstrated how the core concepts were applied to real life situations. This included financial literacy. Early education pertaining to finances helped students make sound fiscal decisions to prevent the stress that accompanies excessive debt and poor budgeting as the financial strain associated with poverty may lead to criminal behavior. HSE programs often secured additional grant funding to assist with technological resources, basic school supplies, and transportation for students. Eliminating economic barriers for students helped improve self-esteem and motivation. Students who were healthy emotionally were able to maintain focus on their educational goals.

Discipline/Criminal Behavior

Student behavioral interventions primarily addressed individual and environmental risk factors through life-skills training, the promotion of education, and improvement of the family structure. Given the historical evidence that education and criminal behavior were connected, additional research examined the risk factors associated with criminal behavior in high school students provided stronger insight into early interventions. This deterred future criminal behavior yet promoted socioeconomic stability and independence (Oudekerk et al. 2012).

The early onset of criminal behavior was among the leading predictors of long-term patterns of career criminals (Natsuaki et al. 2008). Since the primary focus of this

research focused on criminal behavior, it was important to understand the social factors that contributed to criminal behavior in high school equivalency program students. Gaining an understanding of social predictors was essential to identifying the connection to criminal behavior. The main reason for this was that the social behaviors precipitated in educational environments. Furthermore, I wanted to understand more about when the first instance of criminal behavior tended to occur as a means of predicting when interventions are warranted. Further investigation into the trends of criminal behavior among study data from childhood to adulthood concluded that completing high school served as a potential turning point for offenders by promoting a life without criminal behavior (Natsuaki et al. 2008).

Alternatively, research pertaining to recidivistic behavior explored the relationship between recidivism and high school equivalency attainment. Since educational programs exist within both public and private entities and in many communities, the study outlined the impact of education on recidivism rates. The research data collected pertaining to inmates was compared to the recidivism rates among inmates enrolled in a GED program. Nuthall et al. (2003) compared the recidivism rates of inmates who earned their GED (General Equivalency Diploma) while incarcerated with inmates who were released without earning a diploma. Using the age of 21 as a variable for age at the time of release, findings indicated that the rate of recidivism was less in those inmates who earned a GED while incarcerated than those who did not. Additionally, a strong relationship existed among offenders younger than age 21 (Nuthall et al. 2003).

Criminal behavior resulted in both economic and social losses to individuals as well as society. HSE programs used official achievement assessments like HiSet and the GED to award high school equivalency credentials (Heckman et al. 2011). Research pertaining to the attainment of a GED resolved that while character resulted from educational achievement and other important outcomes in life there were concerned that earning a GED was harmful because doing so failed to instill the character skills that impacted self-control and predicted adult success (Sampson, 2016). Subsequent research utilized The Dual Component Theory of Inhibition Regulation which identified self-control as a predictor of crime (Reynolds & McCrea, 2018). Consideration of the roles of socioeconomic as well as demographic factors that assisted researchers with explaining the causes of criminal behavior.

Family

Family support was crucial to student success at all levels of education. Solid family structures supported the qualities of stability and endurance in students. When the family structure was not strong, students were often challenged with taking on additional responsibilities and ensured that the needs of the family unit were met. Lawton- Sticklor (2018) demonstrated the positive impact of family involvement on educational persistence. The qualitative research used student narratives show that the community cultural wealth they received from interactions with their families was integral in motivating them to persist through obstacles in school (Lawton-Sticklor, 2018).

Students who lack familial support also have difficulty developing social bonds within school environments. Charles et al. (2018), concluded that the impact of strong

social support specifically from fathers in at risk families was lower on criminal behavior than families with little involvement. These findings provided implications for student success and motivational interventions because they impacted student retention. Additional research also indicated that a fathers' income level, employment status, and education level were influential in their parental roles (Castillo et al., 2013).

Moreover, for some students the fear of academic success is connected to familial support. HSE programs provided students with referrals to support services for counseling, tutoring, and financial services. These services assisted with deterring strain and criminal behavior in at risk students. Gore et al. (2016) note that experiencing fear of academic success results from uncertainties about the expectations for success that accompany academic success. The perceptions of what is expected of students beyond attaining a high school credential are often derived from familial, peer or instructor influences. The absence of both strong familial and educational support systems could stifle student success and influence criminal behavior among the study population.

Impact of Criminal Behavior on Society

Employability/Educational Opportunities

Criminal behavior had an adverse impact on both employment and educational opportunities. A review of relevant literature suggested that educational opportunities, personal finances, and employment status supported educational persistence (Mundia et al., 2016). Facilitating social mobility and workforce sustainability were common goals among HSE students. Employment opportunities were often limited once an individual was convicted of a crime and established a criminal record. However, there was an

understood basic level of skills competency that was required to sustain employment. Furthermore, the result of this quantitative research suggested that interventions such as education and counseling should have treated mental health problems as well as sociodemographic factors.(Mundia et al., 2016) It was this assertion that promoted the conceptual framework principles of Strain Theory. The attainment of a high school equivalency credential supported self-sufficiency, local economies, and communities in which the study population resided. HSE programs prepared students to enter post-secondary education and the workforce. Therefore, an assessment of the potential barriers to educational attainment was prudent. Moreover, convictions for certain criminal offenses disqualified students from receiving federal financial aid if they decided to enter post-secondary education.

Employability

Among the many negative impacts of criminal behavior was the attainment of adequate employment. HSE program participants received integrated career awareness education in addition to academic subjects' instruction. Research noted that increasing self-worth and interpersonal skills were essential to reducing criminal behavior. Furthermore, Batastini et al. (2014) studied the impact of an applicant's involvement in the criminal justice system during the new student application process. Due to the stress of poverty, many students needed to work while they attended school. However, for those students who had been previously exposed to the criminal justice system it was difficult for them to secure employment, support themselves, and their families. Study results concluded that criminal behavior served as a deterrent when making hiring decisions

(Batastini et al. 2014), One possible solution to this issue was to form partnerships with employers with a specific goal of granting employment for the impacted individuals.

Since prior research declared that a relationship exists between unemployment and crime, Otsu (2016), investigated the impact of rehabilitation on criminal behavior and the labor market. While this research was primarily centered around the debate for the rehabilitation of ex-offenders, the employment components were also pertinent to this study. According to the literature, once crime occurred, rehabilitation reduced the crime rate by providing employment opportunities to individuals who engaged in criminal behavior (Otsu, 2016). It is known that criminal behavior had negative effects on society. However, the alienation of individuals with criminal records from the workforce raised the unemployment rate and increased the opportunity to engage in criminal behavior.

Since criminal behavior has been explored from an ex-offender's perspective, I also examined it from an employer's viewpoint. Schmitt and Warner (2011) noted that there were about 12–14 million ex-offenders in the United States who, in addition to having criminal records, ex-offenders were often victims of employment discrimination. The mark of a criminal record resulted in fewer employment offers from employers which negatively impacted local and national economies. However, when employment discrimination occurred, the effect led to the commission of crimes as the strain related to unemployment became stressful.

Swanson (2012) performed qualitative research that examined employer hiring decisions and attitudes regarding job applicants with felony convictions. This research supported the assertion that job obtainment for people with criminal convictions was

challenging as study results revealed that participating employers wrote policies that would prohibit the hiring of people with felony convictions, while others responded that they knowingly hired felons to provide a framework to help candidates seeking jobs improve their prospects for favorable hiring decisions.(Swanson, 2012)

Referencing the fact that the United States had the highest incarceration rate in the world, Pettinato (2014), examined the consequences of criminal convictions on employers. While it was known that one of the consequences of having a criminal record was unemployment, there was more to be explored about the employer's viewpoint when it came to hiring individuals with criminal convictions. One of the main concern's employers have expressed are the consequences associated with customer perceptions. (Obatusin & Ritter-Williams, 2019). Employers considered stakeholder perceptions however, the information regarding an employee's criminal convictions was generally kept confidential so it seemed that damages based on customers perception would be minimized. Furthermore, Jones-Young and Powell, (2019), asserted that their theoretical model confirmed that the nature of the criminal offense of an ex-offender negatively influenced the hiring managers' perceptions of job applicants and resulted in limited opportunities to gain employment. The study further revealed that employers recognized that ex – offenders often required assistance with acquiring basic workplace skills (Obatusin & Ritter – Williams, 2019). Review of these literary resources confirmed that engaging in criminal behavior presented larger emotional and societal issues beyond commission of the act. HSE programs tailored basic skills and career readiness instruction to accommodate employer's needs when their viewpoints were made known.

Education

Educational attainment has been considered one of the leading predictors of criminal behavior. Many cultures created a need for education which provided social capital and contributed to economic prosperity. Ford and Schroeder (2011) performed a longitudinal study which examined the role of education as a critical point in the life of an individual. Findings suggested that both the attainment of a high school education was a significant milestone, and the pursuit of higher education supported the reduction of recidivism (Ford and Schroeder, 2011). This research supported Hirschi's theoretical assertion that individuals have the need to create social bonds and school was a forum for making commitments and being involved in both academic and social activities. Additionally, HSE program participants received advising and access to post-secondary education resources to support persistence.

Furthermore, Robertson & Walker, (2018) examined the influence of educational factors on criminal behavior. While the study included three additional co-variates, educational factors were noted as strong predictors of criminal behavior (Robertson & Walker, 2018). Adult education programs prevented illiteracy, yet they were also used to prevent crime. Many inmates were functionally illiterate. Auerbach (2019) hypothesized that individuals who committed crime lacked a formal education since most inmates were unemployed, undereducated, and lived in poverty prior to incarceration. However, prison adult literacy and education programs proved to be effective in reducing recidivism. (Center on Crime, Community and Culture, 2003). This study revealed that participation in an adult education program while behind bars reduced the likelihood of recidivism by

nearly 30 percent.(Auerbach, 2019) Additionally, an informal cost-benefit study suggested that for every dollar spent on adult literacy programs for prison inmates, two dollars that normally would have been spent on prosecutions would be saved (Karpowitz & Kenner, n.d.).

Moving forward, an examination of the impact of criminal behavior on specialized HSE programs further supported the need for HSE programs. Alternative research explored Job Corps, a vocational education program for at risk youth and examined the effect of educational attainment on criminal behavior. (Amin, et al. 2016). The inclusion of various demographic variables and the employment of a randomized program participant selection process preserved the integrity of this research. While the research focused on the matriculation to post-secondary education, the findings are pertinent to this study as results concluded that the attainment of a degree was estimated to reduce arrest rates by 32.6% and that the effect was larger to males rather than females and larger for black males than white males. (Amin et al. 2016)

HSE programs offered multiple pathways for adult learners to attain their high school equivalency diploma. HSE diploma and adult high school (AHS) diploma programs were two primary pathways. HSE preparation entailed classroom or online instruction that was aligned with the five subject areas of official assessment. The five areas were Reading and Language Arts, Mathematics, Social Studies, and Science. The adult high school program students continued to earn the remaining credits needed until they earned the twenty-two credits required to earn a high school diploma. HSE programs classified students into educational functioning levels based on the assessment score

achieved during the initial new student orientation process. The core levels are Adult Basic Education program levels one through four and adult secondary education (ASE). Gopalakrishnan, (2008) compared the retention rate of students enrolled in a General Educational Development program to the rates of students enrolled in two adult secondary completion programs. Study results yielded that graduation and retention rates were lower when the GED preparation option was the sole pathway option available to learners since offering multiple pathways increased retention rates (Gopalakrishnan, 2008).

The Methodology Literature Based Description

Quantitative research tested a hypothesis that was generally an assumption about the relationship between the dependent and independent variables. (Bloomfield & Fisher, 2019) The purpose of this study was to determine whether a relationship existed between criminal behavior and the attainment of a HSE credential by HSE program students. Therefore, the selection of a quantitative methodology was appropriate. Quantitative methods are used to exhibit the statistical analysis of data. The present study used archived student data. The dependent variable of this study was the HSE program graduation rate. The independent variable was criminal behavior. The review of relative literature supported the need to identify whether a relationship among the selected variables existed as identification of a relationship had both individual and societal benefits.

Conclusion to the Literature Review

HSE programs have been in existence for many years however, the number of individuals without a high school education remains elevated. Historically, learning was a continuous process because many adults took courses and learned new skills each year via traditional learning methods or by using distance learning platforms. Continuous learning cycles not only benefitted society, but they also improved the quality of life for some individuals. Nearly half of all adults over the age of 16 participated in an education program (Wienclaw, 2019). Past research revealed that there were personal and social barriers to education that impacted an individual's attainment of a high school credential. Considering the types of strain and other challenges that HSE students faced, the review of literature strengthened my insight into additional possible factors that attributed to the non-attainment of a high school credential. Since, the present study explored the relationship between criminal behavior and attainment of a high school equivalency credential by attending HSE programs, the literature also provided increased knowledge about literacy program operations. Beyond the exertion of a direct impact on employment, finances, and self-efficacy, HSE programs incorporated vocational programs through the development of community organization partnerships. Moreover, continued efforts to improve education and crime rates proved to be beneficial on the local, national, and global spectrums.

Chapter 3: Research Method

Restatement of Study Purpose

Many students who had not graduated from high school entered into the competitive world of the adult work force without a high school diploma. Historically, educational opportunities to finish high school abound through General Educational Development. This high school equivalency diploma is commonly known as a GED through HSE certificate programs. Yet the problem that initiated this study was that many of the adults who could complete their education later in life do not take advantage of these opportunities. Of those who do take advantage of these educational opportunities by enrolling in an HSE program, substantial numbers of them do not complete it.

As described in Chapter 1, the purpose of this study was to gain a better understanding of the factors that prevented adult students from completing an HSE program. As shown in the literature review in Chapter 2 of this dissertation, several common demographic variables, such as age and gender, emerged as indicators that accounted for some proportion of adults who suspended the attainment of an HSE diploma. However, there were also some suggestions that criminal behavior was also a variable that contributed to HSE program noncompletion. More information was needed to determine whether a history of criminal behavior informed the status of obtaining, or failing to obtain, an HSE diploma.

Therefore, the purpose of this quantitative research was two-fold. One purpose was to examine the relationship between criminal behavior and high school equivalency program graduation rates to determine if there was a significant association. The other

purpose was to take broad demographic categories into account to see if they played a role in the association between HSE completion status and criminal behavior status. The overall aim was to help the personnel responsible for university adult education programs to better predict the successful outcome of completing an HSE program and obtaining a diploma and to improve the curriculum correspondingly.

This chapter is divided into five sections. The first section describes the research design and rationale. The second section describes the methodology in terms of the population, and sampling procedures. The third section describes the instrumentation and operationalization of constructs. The fourth section describes the data analysis plan by listing the research questions and hypotheses, explaining the approach to the analysis, identifying threats to validity, and describing ethical procedures. The fifth and final section is the summary.

Research Design and Rationale

The research design was quantitative and associational; the rationale for it was that the variables would be categorical (see O'Sullivan, et al. 2017). The variables were group, gender, race, age, HSE completion status, and criminal behavior status. However, the operationalization of each of the variables is provided in the third section of this chapter entitled Instrumentation and Operationalization of Constructs.

The variables of HSE completion status and criminal behavior status emerged with a significant association; therefore, they were interdependent because each served as both independent and dependent variable in relation to the other (see O'Sullivan et al., 2017). That is, their roles as independent variable and dependent variable can be viewed

as interchangeable because a significant association can be interpreted as going in two directions. For example, a person's criminal behavior status may have influenced their HSE completion status, or lack thereof, whereas another person's HSE completion status may have influenced their criminal behavior status, or lack thereof. I examined demographic variables for their status as significant independent variables, covariates, and/or as moderating or mediating variables.

Because all the variables are categorical (see the third section in this chapter entitled Instrumentation and Operationalization of Constructs), I examined associations with chi square tests of independence (see O'Sullivan et al., 2017). Chi square tests of independence were directly related to the research questions. RQ asked if the association between HSE completion status and criminal behavior status differed across the different groups or cohorts for which data were available. The Chi square test was directly related to the research question because the test results could be used to examine the HSE/criminal behavior relationship of each demographic variable.

There were not any anticipated time or resource constraints consistent with this quantitative associational design choice. This study did not include an intervention. The design choice of a quantitative associational design was consistent with research designs needed to advance knowledge in the discipline because most of the data available on the HSE/criminal behavior relationship were categorical in nature.

Methodology

This study was based on archival data. These data were not historical or legal documents. This section describes several elements of the methodology for analyzing this

data: the population, sampling procedures, procedures for recruitment, participation, and data collection associated with the main study, the procedure for gaining access to the data set, and the necessary permissions to gain access to the data.

Population

The target population was defined as adults who did not graduate from high school and/or did not obtain a high school diploma and who enrolled in an HSE program. Estimates of the number of adults in the target population are unavailable. The sampling frame or accessible sample for this study was a subset of the target population who enrolled in an adult education program to complete the coursework necessary to obtain a high school equivalency or adult high school diploma. The coursework was offered by a community college located on the Eastern seaboard of the United States. Permission to download computer-archived data pertinent to HSE status was obtained. The college is hereafter called “the sampled college” and the database is hereafter called “the sampled college’s archival database.” Exclusion criteria included persons who do not have data in the sampled college’s archival database on all the variables of interest. Inclusion criteria, also known as qualifying cases, were students with data in the sampled college’s archival database on all the variables of interest (group, gender, race, age, HSE completion status, and criminal behavior status).

Sampling and Sampling Procedures

The data was selected using the probability sampling by drawing a systematic random sample. This was justified because everyone who qualified for the study had an equal chance of being selected and that chance was known (see O’Sullivan et al., 2017)

because the number of cases in the accessible sample was known. Each qualifying case was given an equal chance of being selected because specific procedures to draw separate samples of HSE completers and non-completers were taken in the following four steps: (a) I identified and downloaded qualifying cases from the three most recent school years available in the archives, (b) I separated the completers from the non-completers, (c) I numbered the cases sequentially starting with 1, and (d) I used a random number generator to randomly select cases to generate random samples.

I ran a power analysis to determine the minimum sample size needed to find the effect. The software for calculating the sample size was G*Power 3.1.9.2. Justification for chi square or contingency table tests was that the variables were categorical. Justification for the moderate effect size entered in the power analysis was that there were no published effect sizes on the relationship between HSE completion status and criminal behavior status to my knowledge. Justification for the alpha level of $\alpha = .05$ and for the power level chosen of $1 - \beta = .80$ was that both were the conventional values (see O'Sullivan et al., 2017). Based on these criteria, power analysis indicated that a minimum of $N = 143$ cases was needed. Based on this estimate, the sample size of each subtotal of HSE completers and non-completers was 70-75 cases.

The data of interest were archived data. Archived data are collected for purposes other than the intended uses of any subsequent analyses and therefore already exist (O'Sullivan et al., 2017). Thus, explicit explanations of the recruiting procedures and particular demographic information collected by researchers generating their own database are not provided because they are not applicable. Moreover, for this study, a

pilot study was not conducted. Thus, no description of the relationship between a pilot study and the main study was provided here. Finally, this study did not include an active or manipulated independent variable so a thorough description of the nature, design, and administration of a treatment, intervention, or experimental manipulation was not provided.

Instrumentation and Operationalization of Constructs

I used neither a published data collection instrument nor a researcher-generated instrument in this study. Instead, the “instrument” in this study was a spreadsheet of archived variables obtained from the sampled college’s archival data on the following variables: group, gender, race, age, HSE completion status, and criminal behavior status. For each variable, this section provides an operational definition, how each variable was measured or calculated (this study did not involve manipulation of variables), what the scores represented, and an example item. The variables were defined as the sampled college defines them.

The variable Group was operationalized as cohort year. The goal was to obtain the three most recent years of data that are available so that the scores reflect the most contemporary relationship between HSE completion and criminal behavior. Group was measured as the school year. The scores represented three levels, one for each school year. An example is Group 1 (e.g., for the 2019-2020 school year).

The variable Gender was operationalized as biological gender and was measured as male or female. The sampled college did not collect data on other gender-identification statuses, such as transgendered persons. The scores represented dichotomized levels and

were dummy coded. For example, males will be coded as 0 and serve as the reference category in analysis.

The variable Race was operationalized as self-identified ethnic identity. It was measured as 5 levels (American Native, Asian, African American, Caucasian, and Other). The scores represented self-identified membership in a major ethnic group or 'other' race and were dummy coded. For example, a case who belonged to the African American ethnic group were coded as 1 and the other four categories will be coded as 0.

The variable Age was operationalized as years of life. Age in years were measured as categories. A score represented membership in a decade category. For example, a case who was 35 years old would be a member of the decade category of 30-39 years of age.

The variable HSE Completion Status was operationalized by obtainment of the HSE diploma. HSE Completion Status was a dichotomized measure. Scores represented 'yes, completed the program and obtained an HSE diploma or 'no, did not complete the program.' The status of 'no' was the reference category and coded as 0.

The variable criminal behavior status was operationalized by arrests. Criminal behavior status will be represented as 'yes, have been arrested at least once' or 'no, have not been arrested' so it was also a dichotomized measure. A case who reported zero arrests was coded as 0. The sampled college did not collect further data on criminal history.

Data Analysis Plan

The software used for analyses was SPSS v 27. Data cleaning and screening procedures involved screening for missing values, outliers, normality, homoscedasticity, and linearity. Missing values were coded as missing because replacing missing values with the mean mainly applied to numeric data. Categorical relationships were examined with chi square tests of independence.

Research Questions

This section restates the research questions and hypotheses here as written in Chapter 1.

RQ: What is the relationship between HSE completion status and criminal behavior status?

H_0 : The association between HSE completion status and criminal behavior status is non-significant. The variables are independent.

H_1 : The association between HSE completion status and criminal behavior status is statistically significant. The variables are interdependent.

Approach to Analysis

This section describes the analysis plan in detail, including the statistical tests that were used to test the hypotheses, procedures used to account for multiple statistical tests, as appropriate; the rationale for inclusion of potential covariates and/or confounding variables, and how results were interpreted.

The research design was quantitative and associational. Because all the variables were categorical (described in the section, Instrumentation and Operationalization of

Constructs), the statistical test that was used to test the hypotheses for significant associations in RQ were nonparametric chi square tests of independence. The procedure to account for multiple statistical tests was the Bonferroni adjustment (O'Sullivan et al., 2017). The rationale for including potential covariates and/or confounding variables was determined by the outcomes of RQ, which was important to run to account for the possibility that the relationship between HSE completion status and criminal behavior status differed by different demographic characteristics. For example, the HSE/criminal relationship may occur in one pattern among Caucasian men but occur in another pattern among African American women. The results were interpreted as significant or non-significant associations between HSE Completion Status and Criminal Behavior Status alone and as a potential function of demographic characteristics.

Threats to Validity

The variables were downloaded from the sampled college's archival database. A potential threat to external validity was that there may be some unknown element that distinguished the students who enrolled in the sampled college compared to other community colleges. This can be identified primarily through a series of replications of this study.

There was some possibility of threats to internal validity. For example, there was a possibility that the most recent data were influenced by the internal threats of history because of the catastrophic impacts of the coronavirus quarantine on human society here in the USA and internationally. Depending on the specifics of one's (financial, medical, and familial) situation, finishing one's coursework to obtain an HSE diploma may have

taken on heightened importance or sustained a dramatic drop in importance in view of the larger scheme of things. This potential was addressed by comparing the different groups (cohorts) for the RQ.

There was a possible threat to construct or statistical conclusion validity from the operationalization of criminal behavior status for three reasons. One, the sampled college collected a very broad measure of criminal activity: simply whether an illegal activity ended with an arrest. This removed all criminal activity that did not end with an arrest from analysis and constituted some proportion of sampling error. Two, this very broad measure obscured frequency by treating cases who were arrested once the same way as cases who were arrested multiple times. Three, this very broad measure obscured the nature of the criminal activity by treating cases who were arrested once for petty shoplifting the same way as cases who were arrested multiple times for repeated crimes of rape and murder.

Ethical Procedures

Permission was obtained from the sampled college to examine cases from their archival database for this study. Because the data in this study was archived, the data that was available for download had already been collected. As a result, it was unnecessary to establish or employ procedures for the ethical treatment of human participants. Further, because the data in this study was archived, it was unnecessary to develop mitigation plans related to ethical issues raised by recruitment materials, processes, or data collection procedures, again because the data have already been collected.

However, I obtained institutional permission from Walden's Institutional Review Board committee (02-08-21-0032948). Moreover, archival data were treated as follows to respect the persons who contributed information and protect the confidentiality of their identifying information. The cases in the sample college's archival database were not anonymous because the college's data analyst and other college personnel who had access to the data had access to identifying information such as name, etc. However, the researcher did not have direct access to the archival data computers. Instead, the data analyst agreed to download the data according to this researcher's inclusion criteria. Only the Student ID number was included to identify each case (so that it could be used to 'scramble' the data for systematic probability sampling) and was therefore anonymous to this researcher. Once the systematic random sample was generated, this researcher replaced the Student ID numbers with new case numbers for the purpose of this study. The assignment of new case numbers was another way to further protect the anonymity of the data. Further steps to protect the anonymity of the data include housing data in the researcher's password-protected computer, reporting the results in aggregate form, and destroying the data three years after the completion of the study.

Summary

The purpose of this quantitative research was two-fold. One purpose was to examine the relationship between criminal behavior and high school equivalency program graduation rates to determine if there was a significant association. The other purpose was to take broad demographic categories into account to see if they played a role in the association between HSE completion status and criminal behavior status. The

overall aim was to help personnel responsible for university adult education programs to better predict the successful outcome of completing an HSE program and obtaining one's diploma, and to improve the curriculum correspondingly.

The research design was quantitative and associational; its rationale was that the variables were measured categorically. The variables were group, gender, race, age, HSE completion status, and criminal behavior status. Demographic variables were examined for their status as significant independent variables, covariates, and/or as moderating or mediating variables whereas the variables of HSE completion status and criminal behavior status were interdependent. Methodology was described in terms of the population and sampling procedures. The target population is defined as adults who do not obtain a high school diploma and enroll in a HSE program. The sampling frame or accessible sample was the subset of students without high school diplomas who enrolled in a community college adult education program to complete the coursework necessary to earn a HSE diploma. Inclusion criteria was students with data in the sampled college's archival database on all the variables of interest. The data was selected with the sampling strategy of probability sampling by drawing a systematic random sample. Power analysis indicated that a minimum of $N = 143$ cases was needed. The Instrumentation and Operationalization of Constructs section described each variable with an operational definition, how each variable was measured, what the scores represented, and an example item. The Data Analysis Plan listed the primary research question and hypotheses. The statistical test was non-parametric chi square tests of independence. The Bonferroni

adjustment accounted for multiple statistical tests. The rationale for including potential covariates and/or confounding variables was determined by the outcomes of the RQ

The results were interpreted as significant or non-significant associations between HSE completion status and criminal behavior status alone and as a potential function of demographic characteristics. A potential threat to external validity was that some unknown element may distinguish the students who enrolled in the sampled college compared from students who enrolled in other community colleges. Potential threats to internal threats included history because of the catastrophic impacts of the coronavirus quarantine on human society internationally. Three reasons were given as potential threat to construct or statistical conclusion validity from the operationalization of criminal behavior status primarily because the measure was so broad.

Chapter 4: Results

Introduction

Brief Review of the Purpose

A significant number of students who attended high schools in the United States of America did not graduate from high school (Suh, 2019). Instead, they enter the competitive world of the adult work force without a high school diploma, even though American educational opportunities to finish high school abound. Educational opportunities include General Educational Development, the GED, and HSE programs. However, a substantial proportion of the adults who have taken advantage of GED or HSE educational opportunities also did not graduate from them with a high school equivalency diploma (O'Donnell et. al 2019). Failure to graduate from GED or HSE programs was the problem that initiated this study.

Specifically, the purpose of this study was to understand the role of criminal behavior among adult students who either complete or fail to complete an HSE diploma program. As suggested by the literature review in chapter 2 of this dissertation, criminal behavior was a possible variable that contributed to HSE noncompletion. The literature also held that common demographic variables such as gender, race, and age emerged as indicators that accounted for some portion of adults who failed to graduate from an HSE program. More research was required to determine whether a history of criminal behavior informed the status of obtaining, or failing to obtain, an HSE diploma while also factoring in general demographic characteristics.

Therefore, my primary aim for this quantitative archival study was investigating the relationship between criminal behavior and HSE completion while secondarily factoring in gender, race, and age. The overall goal was to help personnel responsible for university adult education programs better predict the successful outcome of completing an HSE program and obtaining a certificate and to improve the curriculum correspondingly.

Data were archival. Cases that were downloaded from the archival database were divided into two groups, completers who graduated from the HSE program, and non-completers, who dropped out of the HSE program before graduating; together they composed the variable, HSE completion status. The variable criminal behavior status was a simple dichotomy of yes or no, which was the only information available for download. In this chapter, the word relationship is used synonymously with association.

Research Question

There was one primary research question:

RQ: Does a correlation exist between criminal behavior and the successful completion of a high school equivalency program?

Hypotheses that corresponded to specific statistical analyses are listed in the sections below in which I present those results.

Organization of Chapter 4

This results chapter is divided into four main sections. The first is data collection. The second is treatment and/or intervention fidelity. The third section presents the results,

introduced with a brief explanation of chi square tests of independence. The fourth section is the summary. A pilot study was not applicable to this archival research.

Data Collection

The data were archival and downloaded from a community college located on the Eastern seaboard of the United States that offers the HSE coursework during the time frame of February 11, 2021, to February 25, 2021. Because the data were archival, participant recruitment and response rates do not apply.

There was a discrepancy in data handling from the plan presented in Chapter 3: the unanticipated need to generate a random sample. The problem that initiated this study was the high proportion of adults who enrolled in HSE programs who failed to graduate from them. This problem was reflected in the data with staggering emphasis: The archived database of $N = 1,072$ cases represented an extreme skew toward non-completers ($n = 999$ cases, 93%) compared to only $n = 73$ completers (7%) who completed the HSE. Of the 73 completers, two lacked information on race and were dropped from further analyses. Because the extreme skew towards non-completers could have easily generated spurious significant differences (Type I errors), it had to be addressed. Therefore, I generated a random sample of non-completers that matched the demographics of the completers by taking the following steps. Visual inspection of the numbers and proportions of cases by gender and race among the 71 completers showed that three-quarters (73%) were African Americans ($n = 31$ African American men, 44%; $n = 21$ African American women, 29%) and one-quarter (27%) were Caucasian ($n = 10$ Caucasian men, 14%; and $n = 9$ Caucasian women, 13%). Other races were not present in

the completers group. The total number of 536 men non-completers was composed of 401 African American men, 109 Caucasian men, 23 men who lacked race information, and 3 men of “other” races. The total number of 463 women non-completers was composed of 326 African American women, 91 Caucasian women, 34 women who lacked race information, 10 American Native women, and two Asian women. I used the random selection feature in SPSS to generate a gender x race sample of non-completers ($n = 71$ non-completers) that matched the proportions of the completers’ sample. Otherwise, data handling matched that described in Chapter 3. Significance was set at $\alpha = .05$.

The target population for this study was defined as adults who did not obtain a high school diploma and who enrolled in an HSE program. The representativeness of this study’s sample to the population of interest was suggested by similarities with dropout and GED statistics from the National Center for Education Statistics (n.d.). The National Center for Education Statistics estimated that there were 2.1 million dropouts aged 16-24 and an overall dropout rate of 5.3% in 2018. The National Center for Education Statistics also estimated that approximately a third of Caucasian high school dropouts and a fifth of African American dropouts eventually earned a GED or HSE, with much lower percentages among other races. Correspondingly, this study’s sample reflected Caucasian and African American cases.

Treatment and/or Intervention Fidelity

This research did not include a formal treatment or intervention that I actively manipulated. There were not any challenges that prevented planned implementation as described in Chapter 3.

Results

This results section is presented in two parts. The first part explains chi square tests of independence. The second part presents results for the research question and results of factoring in the demographic variables.

Chi Square Tests of Independence

Descriptive statistics that characterized the sample were reported above with the explanation of generating the random sample of non-completers, and subsequent descriptive statistics are presented with the results for the research question below. Chi square tests of independence are nonparametric tests that are used to evaluate the statistical significance of the relationship between two categorical variables by cross tabulating the variables and comparing observed to expected counts (Weaver & Goldberg, 2011). The overall chi square test of independence statistic indicated whether the distribution of observed counts differed significantly or non-significantly from the distribution of counts expected by chance. Individual pairs of observed and expected counts were then inspected for statistical significance by transforming the difference between them into z scores called adjusted residuals. Adjusted residuals that are ± 1.96 identify significant differences in pairs of observed versus expected counts (Siegel & Castellan, 1988). There cannot be more than 20% of the cells with expected counts of 5

or the test requires replication for verification (Siegel & Castellan, 1988). For chi squares, data must be measured categorically but not constrained to meet assumptions of statistical normality. Results of 2x2 tests in this study were the Yates correction for continuity statistic, which is a slight mathematical modification so that the chi square statistic has a better fit with the chi square distribution. Adjusted residuals are reported when applicable as z scores that show the significance of differences between the observed and expected counts.

The effect size statistics were phi Φ (pronounced “fee”) correlations for dichotomous categorical variables and corresponding coefficients of determination. The phi (Φ) correlation is a special case of the Pearson product-moment correlation for measuring the strength of a linear relationship between two variables when both variables are dichotomous (i.e., each has only two levels; Weaver & Goldberg, 2011). For each variable, one level is coded as 0 and the other level is coded as 1 (i.e., the variables are “dummy coded”). Then a Pearson’s correlation was run on the dummy coded variables. Because the level that was coded as 0 was arbitrary, the sign of the correlation was also arbitrary and was ignored. Although the aim of correlation was to measure the strength of a statistical relationship between two variables, the strength of the relationship was best described by the coefficient of determination, r^2 , which measured how much of the variability in one of the variables was predicted or determined by its statistical relationship with the second variable. Coefficients of determination and Φ correlations are interpreted like Pearson’s correlation coefficients as indicative of small, medium, or large effects (Cohen, 1988).

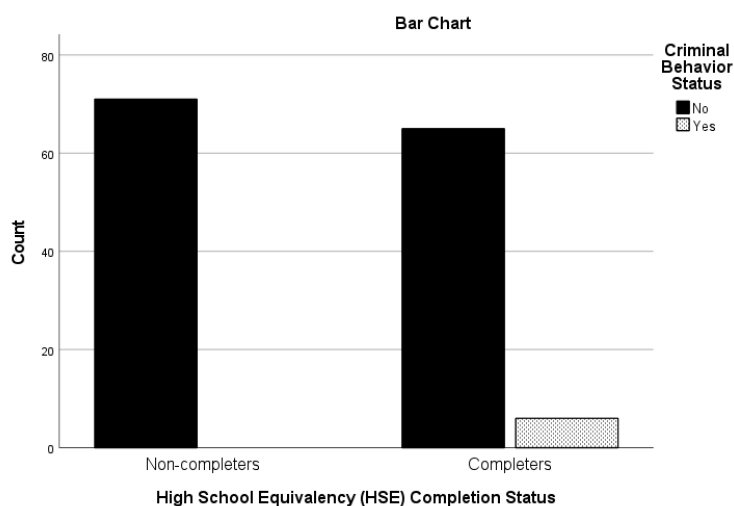
Results for Research Question

RQ: Does a correlation exist between criminal behavior and the successful completion of a high school equivalency program?

The data were categorical, so the correlation was measured as the strength and statistical significance of the association or relationship between HSE completion and criminal behavior. Figure 1 illustrates how the $N = 142$ cases were distributed across the cross-tabulated categories. Half of the cases were non-completers ($n = 71$ non-completers). None had a history of criminal behavior. In contrast, among the other half of the sample ($n = 71$ completers), 65 completers did not have a history of criminal behavior (46% of the cases) and 6 completers had a history of criminal behavior (4% of the cases).

Figure 1

Crosstabulation of High School Equivalency Completion Status and Criminal Behavior Status for Entire Sample



The significance of the relationship was tested with a chi square test of independence. The hypotheses were:

H_0 : There is a not statistically significant relationship between criminal behavior and HSE program completion.

H_1 : There is a statistically significant relationship between criminal behavior and HSE program completion.

Results of the chi square test of independence across the entire sample showed that the relationship between HSE completion status and criminal behavior status was statistically significant ($X^2 (1, N = 142) = 4.35, p = .037$). The null hypothesis was rejected. Table 1 shows the statistics. Among the non-completers, there were significantly more non-completers without a criminal history and fewer non-completers with a criminal history than expected by chance (Table 1). In contrast, among the completers, there were significantly fewer completers without a criminal history and more completers with a criminal history than expected by chance. The effect of criminal behavior on HSE completion was small ($\Phi (140) = .21$) but statistically significant ($p = .012$), accounting for 4% of HSE completion status ($r^2 = .04$). However, the two cross-tabulated cells referring to cases with a history of criminal behavior had expected frequencies less than 5 so these results should be viewed with caution until replicated with a larger database.

Table 1*High School Equivalency Completion Status x Criminal Behavior Status Crosstabulation*

High school equivalency (HSE) completion status		Criminal		
		behavior status		Total
		No	Yes	
Non-completers	Observed count	71 ^a	0 ^b	71
	Expected count	68.0	3.0	71.0
	% within criminal behavior Status	50%	0%	50%
Completers	Adjusted residual	2.5	-2.5	
	Observed count	65 ^a	6 ^b	71
	Expected count	68.0	3.0	71.0
Total	% within criminal behavior status	46%	4%	50%
	Adjusted residual	-2.5	2.5	
	Observed count	136	6	142
	Expected count	136.0	6.0	142.0
	% within criminal behavior status	50%	50%	100%

Note. Each superscript letter pair denotes a subset of criminal behavior status categories whose column proportions do not differ significantly from each other at the .05 level.

The next sections show the results of factoring in gender, race, and age. Instead of repeating the chi square test of independence hypotheses for every analysis, the generic hypotheses were:

H_0 : The relationship between HSE completion status and criminal behavior status was not significant for (men, women, African Americans, Whites, cases 16-29 years old, cases 30-83 years old).

H_1 : The relationship between HSE completion status and criminal behavior status was statistically significant for (men, women, African Americans, Whites, cases 16-29 years old, cases 30-83 years old).

To determine whether the significant relationship between HSE completion and criminal behavior was related to the men or to the women, chi square tests of independence men and women were examined separately, and the results compared.

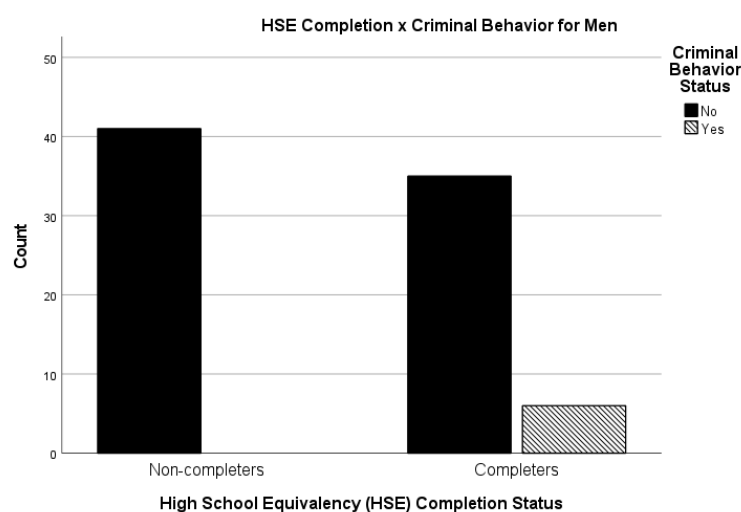
Men

For the $N = 82$ men in the sample, Figure 2 shows that none of the $n = 41$ non-completers had a history of criminal behavior. In contrast, 35 of the $n = 42$ completers did not have a history of criminal behavior and 6 men did. Results of the chi square test of independence for men showed that the relationship between HSE completion status and criminal behavior status was statistically significant ($X^2(1, N = 82) = 4.49, p = .034$). The null hypothesis was rejected. Among the non-completers, there were more men without a criminal history ($z = 2.5$) and fewer men with a criminal history than expected by chance ($z = -2.5$). In contrast, among the completers, there were fewer men without a criminal history ($z = -2.5$) but more men with a criminal history ($z = 2.5$) than expected. The effect

of criminal behavior on completion among the men was small ($\Phi(80) = .28$) but statistically significant ($p = .011$), accounting for 8% of HSE completion status ($r^2 = .08$). However, again the two cells associated with criminal behavior had expected frequencies less than 5 so these results should be viewed with caution until replicated with a larger database.

Figure 2

Crosstabulation of High School Equivalency Completion Status and Criminal Behavior Status for Men

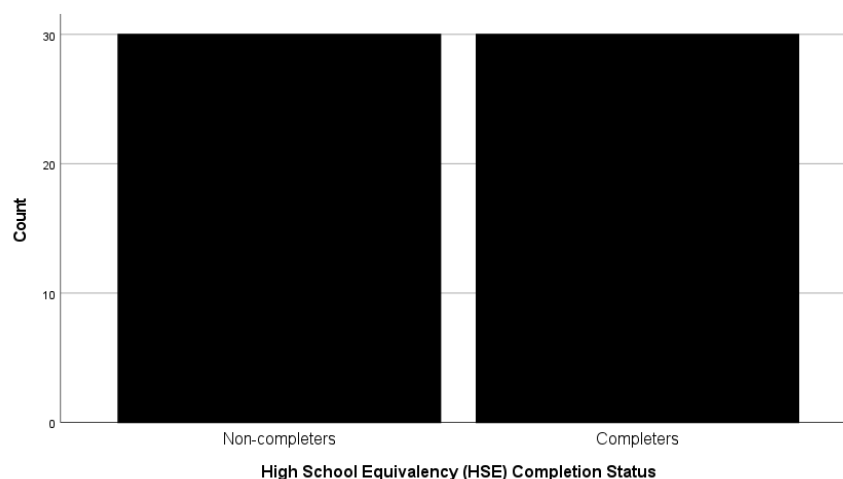


Women

Figure 3 shows that a subtotal of $n = 30$ women were non-completers and $n = 30$ women were completers. None of the women in the entire database had a history of criminal behavior. Therefore, there were not any data to cross-tabulate and a chi square test of independence could not run.

Figure 3

Counts of High School Equivalency Completion Status for Women



To determine whether the significant relationship between HSE completion and criminal behavior was related to race, chi square tests of independence for African Americans and Whites were examined separately and the results compared.

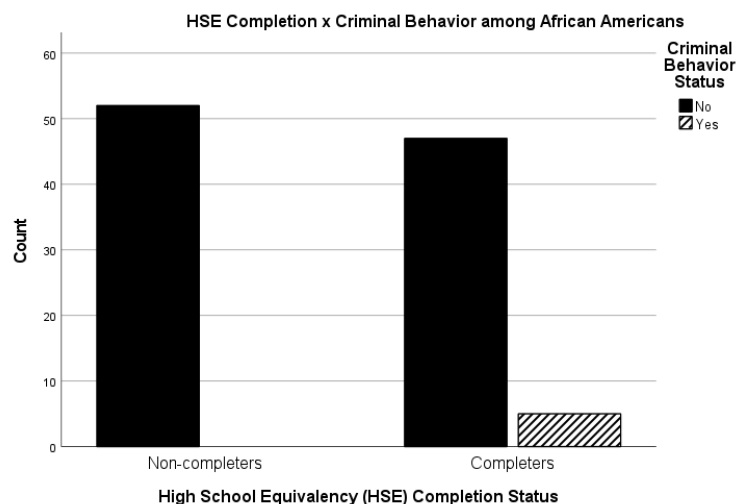
African Americans

There were $N = 104$ African Americans in the sample. Figure 4 shows that none of the $n = 52$ non-completers had a history of criminal behavior, 47 of the $n = 52$ completers did not have a history of criminal behavior, and the remaining 5 African Americans had a criminal history. Results of the chi square test showed that the relationship between HSE completion status and criminal behavior status was not statistically significant for African Americans, although there was a strong trend toward significance ($X^2 (1, N = 104) = 3.36, p = .067$). The null hypothesis was retained. However, adjusted residuals showed significant differences between the observed counts and the counts that were expected by chance. Among the non-completers, there were

significantly more African Americans without a criminal history ($z = 2.3$) and fewer with a criminal history than expected by chance ($z = -2.3$). In contrast, among the completers, there were significantly fewer African Americans without a criminal history ($z = -2.3$) and more with a criminal history ($z = 2.3$) than expected. However, the effect of criminal behavior on HSE completion was small although it was significant ($\Phi(102) = .23, p = .022$), but accounted for only 5% of HSE completion ($r^2 = .05$). Again, the two cross-tabulated cells associated with criminal behavior status had expected frequencies less than 5 so these results should be viewed with caution until replication with a larger database.

Figure 4

Crosstabulation of High School Equivalency Completion Status and Criminal Behavior Status for African Americans

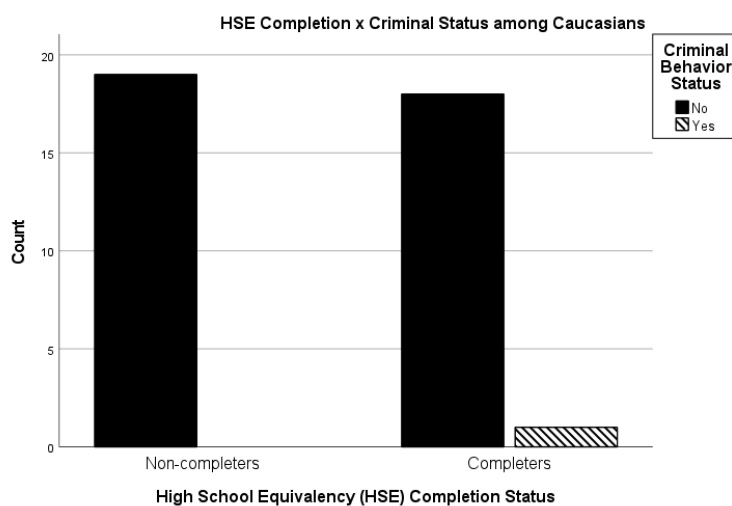


Caucasians

Among the $N = 38$ Caucasians in the sample, Figure 5 shows that none of the $n = 19$ non-completers had a history of criminal behavior, 17 of the $n = 19$ Caucasian completers also did not have a history of criminal behavior, and one Caucasian completer had a criminal history. Results of the chi square test showed that the relationship between HSE completion status and criminal behavior status was not statistically significant for Caucasians, ($\chi^2 (1, N = 38) = 0.00, p = 1.00$). The null hypothesis was retained. The effect of criminal behavior on completion was small ($\Phi (36) = .17$) and non-significant ($p = .298$), accounting for only 3% of HSE completion status ($r^2 = .03$). Again, the two cross-tabulated cells for criminal behavior had expected frequencies less than 5 so these results should be viewed with caution until replication with a larger database.

Figure 5

Crosstabulation of High School Equivalency Completion Status and Criminal Behavior Status for Caucasians



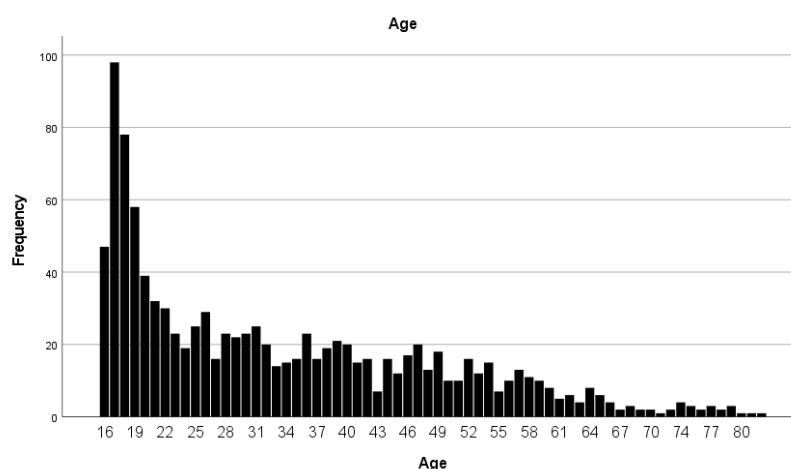
Age

Finally, to determine whether the significant relationship between HSE completion and criminal behavior was related to age, chi square tests of independence for the youngest half and the oldest half of the cases was examined separately and the results compared. To examine age categorically like race and gender, age data points were transformed from the original ratio-scaled, continuous variable to a dichotomous, categorical variable with a median split to create two age classes.

The original age data are illustrated on Figure 6. The range was considerable at 67 years (*minimum* = 16 years old, *maximum* = 83 years old). The overall mean of $M = 33.33$ years of age ($SD = 0.48$, $95\% CI [32.39, 34.26]$) was slightly higher in value than the median ($Mdn = 29$ years old). The median showed that half of the cases in the database were 29 years old or younger, so age was transformed with a median split. The two age brackets were 16-29 years old and 30-83 years old. After the median split, there were $n = 83$ cases who were 16-29 years old and $n = 59$ cases who were 30-83 years old.

Figure 6

Distribution of Age in Years as a Continuous Variable

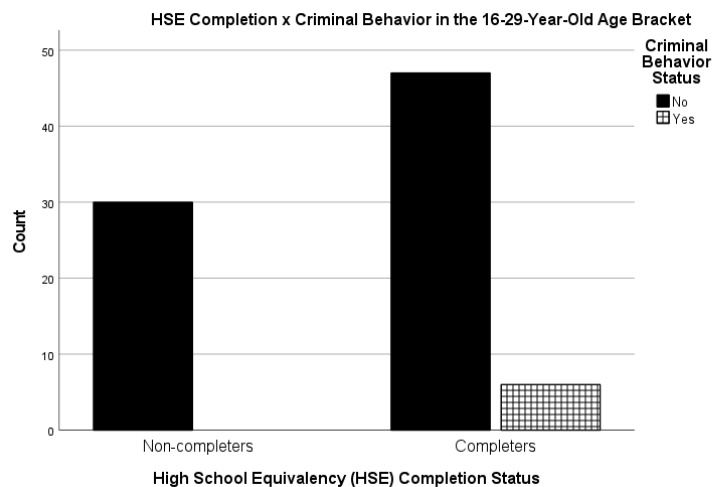


Cases in the 16 to 29-Year-Old Age Bracket

Figure 7 illustrates how the $n = 83$ cases in the 16-29-year-old age bracket were distributed across the cross-tabulated categories. None of the $n = 30$ non-completers had a history of criminal behavior, 47 completers did not have a history of criminal behavior, and 6 completers had a criminal history. Chi square results showed that the relationship between HSE completion status and criminal behavior status was not statistically significant among cases in the 16-29-year-old age bracket ($X^2 (1, N = 83) = 2.17, p = .141$). The null hypothesis was retained. The effect of criminal behavior on completion was small ($\Phi (81) = .21$), bordered on statistical significance ($p = .056$), and account for only 4% of HSE completion status ($r^2 = .04$). Again, the two cross-tabulated cells associated with criminal behavior had expected frequencies less than 5 so these results should be viewed with caution until replication with a larger database.

Figure 7

Crosstabulation of High School Equivalency Completion Status and Criminal Behavior Status for Cases in the 16–29-Year-Old Age Bracket

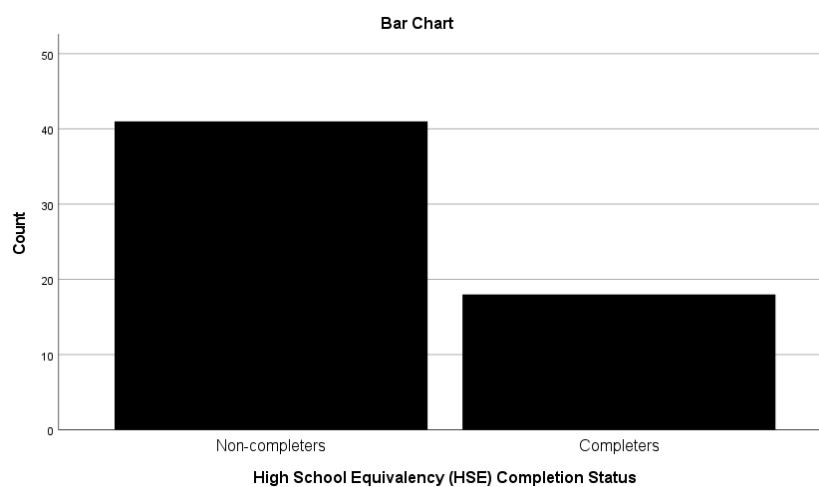


Cases in the 30 to 83-Year-Old Age Bracket

Of the $N = 59$ cases in the 30-83-year-old age bracket, Figure 8 shows that none of the $n = 41$ non-completers and none of the $n = 18$ completers had a history of criminal behavior. Therefore, there were not any data to cross-tabulate and a chi square test of independence could not run.

Figure 8

Counts of High School Equivalency Completion Status for Cases in the 30–83-Year-Old Age Bracket



Summary

The purpose of this study was to understand the role of criminal behavior among adult students who either complete or fail to complete an HSE program. A substantial proportion of students in the United States of America did not graduate from high school. Similarly, a substantial proportion of adults who enrolled in GED or HSE programs later in life also did not graduate. This quantitative archival study had the primary aim of investigating the relationship between criminal behavior and HSE completion while factoring in gender, race, and age. Archival cases were downloaded and divided into two groups, *completers* who graduated from the HSE program, and *non-completers*, who dropped out of the HSE program before graduating; together they compose the variable. The variable, *criminal behavior status*, was a simple dichotomy of yes or no.

The archived database of $N = 1,070$ cases represented an extreme skew toward non-completers ($n = 999$ cases, 93%) compared to only $n = 71$ completers (7%) who completed the HSE. To circumvent spurious significant differences (Type I errors) from highly skewed data, I generated a random sample of non-completers that matched the demographics of the completers, $n = 71$ non-completers. Relationships between HSE completion and criminal behavior were measured with chi square tests of independence.

The answer to the RQ (Does a correlation exist between criminal behavior and the successful completion of a high school equivalency program?) was yes. Although the proportion was low, significantly more completers had a history of criminal behavior than expected by chance. When factoring in the role of gender, the same significant relationship emerged among the men. Men who completed the HSE program were more likely to have criminal histories than men who did not complete the HSE program. In strong contrast, none of the women had criminal histories. Results for the role of race were equivocal. The relationship between HSE completion and criminal behavior among African Americans was non-significant at the overall level, although adjusted residuals revealed significant differences between observed and expected counts. Again, there were significantly more completers with a criminal history than expected by chance. Among Caucasians, the overall relationship was non-significant. When factoring in the role of age, the nature of the relationship was the same among cases in the 16-29-year-old age bracket (more cases with criminal histories among completers) but the overall relationship was statistically non-significant. None of the cases in the 30-83-year-old age bracket had criminal histories. The final chapter discusses the results, reviews the study

purpose, and provides insight into positive implications for social change followed by recommendations for future studies.

Chapter 5

In response to the issues surrounding high school dropout rates, this quantitative study provided a thorough explanation of why HSE programs existed and how they operated. Terry (2018) expressed the continued need to gather information about providing educational services to individuals who dropped out of school and enrolled in alternative adult education programs. While the primary focus of past studies was limited to the academic and social barriers commonly associated with dropping out of high school in traditional learning environments, this research highlighted the impact of criminal behavior on attaining a high school credential via alternative HSE programs. Furthermore, the study addressed the underlying causes of criminal behavior and provided insight into the resources and support services needed by students enrolled in HSE programs. The grounds for conducting this research were to investigate the existence of a relationship between criminal behavior and HSE program completion. In this chapter I provide an interpretation of the findings, discuss study limitations, highlight the positive implications for social change, and make recommendations for future studies.

Interpretation of the Findings

The review of literature in Chapter 2 addressed some of the social and personal barriers to education and the impact of criminal behavior on society. An examination into these barriers precipitated the need to examine these barriers on a broader scope as education attainment has both personal and societal impacts. Therefore, in addition to examining the impact of criminal behavior on HSE program completion rates, this research also explored demographic variables of age, race, and gender. Chi square tests of

independence were used to evaluate the statistical significance among the key variables in this study. The research question was as follows:

RQ: Does a relationship exist between criminal behavior and the successful completion of a high school equivalency program?

There were more non-completers without a history of criminal behavior than chance and there were more with a history of criminal behavior than chance. The effect of criminal behavior only accounted for four% of the HSE completion status therefore it is recommended that the study be replicated using a larger database. The chi square tests among the non-completers showed that there were more men without a criminal history and fewer men with a criminal history than expected by chance. Among the completers there were fewer men without a criminal history but more men than expected with a criminal history. Although the effect of criminal behavior on completion among men was small, it was still statistically significant. Because none of the women who were non-completers in the database had a history of criminal behavior, a chi square test of independence could not be run. However, to determine whether the significant relationship between HSE completion and criminal behavior was related to race, I ran chi square tests of independence for African Americans and Caucasians. The relationship among African Americans trended toward significance but adjusted residuals showed significant differences. Among the 38 Caucasians in the sample, only one student in the completer group had a criminal history compared to the 19 non-completers who had a history of criminal behavior. Finally, chi tests of independence were run to determine whether the significant relationship between HSE completion and criminal behavior was

related to age. There was a total of 3 cases in the 16–29-year-old age bracket. Among the 30 cases in the non-completers group, none had a history of criminal behavior. Forty-seven completers did not have a history of criminal behavior, and six completers had a criminal history. Chi square tests results showed that there was not a significant relationship between HSE completion and criminal behavior in this age bracket. For the 30–83-year-old age bracket, the data showed that none of the completers and non-completers groups had a history of criminal behavior. Study results concluded that the relationship between HSE completion status and criminal behavior was statistically significant across the entire sample. The findings also confirmed that existing knowledge pertaining to the impact of demographical factors such as race and gender on the attainment of a high school credential are relevant and that a relationship exists between criminal behavior and obtaining a high school credential for HSE program students.

Interpretation of the Findings in the Context of Theoretical Framework

The theoretical frameworks of this study were based on Merton's strain theory (Snell, 1994) and Hirschi's Social control theory (Ruth, 2020). In this research I considered the possible reasons why individuals engage in criminal behavior as well as the types of strain that contribute to it.

The results of this study concurred with the assertions of strain theory. Strain theory indicates that individuals commit crimes because their accomplishments do not align with the traditional norms of society. The attainment of a GED by nontraditional methods was not always perceived as having the same moral value as the attainment of a high school diploma in traditional school environments. Research has also noted that

some individuals combine both legitimate and illegitimate means of opportunity to commit crimes while trying to pursue their dreams.(Murphy & Robinson, 2008).

Furthermore, the results of this study yielded that more students who had completed the HSE program engaged in criminal behavior than students who did not complete the program.

Social control theory indicates that criminal behavior is a result of social obstruction. The lack of a high school education leads to roadblocks due to lack of financial or social stability for HSE students. The results of this study were consistent with the premise of social control theory because cases in the HSE non-completers also did not have a significant relationship to criminal behavior; therefore, the reason for noncompletion was connected to other social or personal barriers. Moreover, the research showed that age and criminal behavior correlated (Sweeten et al. 2013). The relationship between HSE completion among cases in the 16–29-year-old age bracket was not statistically significant. Furthermore, none of the completers in the 30–83-year-old age group had a history of criminal behavior.

Limitations of the Study

The purpose of this quantitative study was to examine the relationship between criminal behavior and high school equivalency program graduation rates. There were some limitations to this study. First, a modification was made during the data collection process. Due to the exceptional number of individuals who enrolled but did not graduate from the HSE program, the need to generate a random sample was crucial to prevent Type I errors.

Interestingly, in Chapter 1 I projected that because the completion time for each student varied, completion data for some students would not be available during the study period. However, the data was retrieved from the sample college's database included data on both completion and noncompletion status students. Next, because the HSE program enrollment data was supplied via the research data specialist, a change in employment in that position could result in the delay of program data being provided to me. Employee turnover did occur in the research data specialist position, which caused a 1-week delay in the time required to download the data from the database. The final limitation was attributed to the use of one specific program's data, which resulted in a limited sample size but provided opportunity for future studies.

Recommendations for Further Research

The lack of a high school education exacerbates societal injustice and restricts training opportunities (Holleman & Abell, 2019) The main purpose of this research was to determine the relationship between criminal behavior and HSE program completion. Considering the study limitations, this research extended knowledge about HSE programs and the individuals they served, and it provided valuable insight into education and criminal justice institution administrators who positively influenced their HSE program completion rates. The first recommendation for further research is replication of the current study. Replication provides the opportunity for increased validity to the study findings. If another researcher replicated this study's results, it would increase the likelihood that the results can be generalized to the larger population. Because this study was limited to one program's database, replication with a larger database is

recommended to support the findings in this study. Research exclaims that the use of the term data is changing in the areas of social policy development and public service management. (Torrance & Flick, 2019) Therefore, the second recommendation is to conduct a qualitative research study that evaluates the perceptions and experiences of HSE program participants. Research acknowledges the belief that qualitative dimensions are present in quantitative work (Aspers & Corte, 2019) Furthermore, qualitative research can facilitate teaching and communication among researchers. The employment of a qualitative study design for this topic could provide greater insight into the specific types of criminal behavior in which the study participants engage and support HSE program policies to improve student retention.

Recommendations for Practice

The dynamics of HSE programs are still evolving. The information gathered in this research pertaining to the barriers to HSE student retention is useful to state community college administrators, instructional faculty, criminal justice education program administrators, policy makers, and HSE program directors. It is my hope that both criminal justice and education professionals would consider the barriers of HSE students including criminal behavior, which is delineated in this study, to create drop out intervention plans for HSE program students. Further examination specifically among multiple HSE programs would prove insightful and add to historical research regarding the main study variable of criminal behavior. Additionally, an intricate look into the criminal behavioral patterns of HSE program students would help create stronger post

release plans for individuals who engage in criminal behavior and have not obtained a level of education that is equivalent to a high school diploma.

Implications

The purpose of this research was to understand the impact of criminal behavior on HSE program student completion rates. Stakeholders who are responsible for the support of HSE program students will gain insight from this research. The following professionals share interest in the overall reduction of both high school dropout and crime rates: adult education program administrators, probation/parole officers, instructors, legislators, community-based organizations, and correctional programming officials. This research keeps the societal issues of criminal behavior and the high school dropout plague on the radar of policy makers, community college administrators, and criminal justice professionals. Past research focused on the academic and social barriers that cause individuals to dropout of traditional high school environments. However, this research focuses on the academic, social, and personal barriers that impact HSE program students and hinder completion. This research confirmed that criminal behavior and HSE program have a significant relationship. The integration of structured early intervention plans, retention, and advisory efforts improve the student completion rates of HSE programs.

Education is a major component in achieving individual and societal sustainability. Therefore, I approached this research from the literature review to the data analysis and finally the recommendations to confirm a relationship between criminal behavior and HSE program completion. Research ascertains that graduation from high school based on the traditional school timeline is a leading health indicator (Shuli,

Chattopadhyay, & Hahn, 2016). Therefore, we must consider the role that education plays in the lives of non-traditional students as well as the impact of criminal behavior on society. The implementation of HSE program intervention plans that deter criminal behavior increase the probability that students will complete the program by earning a high school credential.

Conclusion

The number of individuals who have not earned a high school education today is alarming. Individuals seeking to earn a high school equivalency credential through HSE programs deserve to have the support and resources that are available to students in traditional learning environments. Hence, adult education environments continue to incorporate innovative practices that prepare HSE students for standardized high school equivalency assessments and beyond (Gruen,2018), it is important to ensure that efforts continue that will reduce the dropout and crime rates among HSE program students. Although the primary objective of this study was to determine the relationship between criminal behavior and HSE program completion, high school dropout rates should remain at the forefront of decision makers because a skilled workforce, lower crime rates, and productive familial relationships are essential to the positive social climate that exists within individual communities and society in general. Furthermore, developing strategies and interventions that assist HSE program students with overcoming barriers may prove to increase the number of students obtaining at least the minimum of a high school education and decrease their propensity to engage in criminal behavior.

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